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RECENT DISCUSSIONS ON RAILWAY MANAGEMENT IN PRUSSIA.*

THE list of pamphlets and articles given below indicates how active a discussion has been taking place of late on certain phases of railway administration in Prussia. Some account of this discussion may be of interest to English-speaking students of railway matters and of public business management. For convenience in following its course, the various publications have been grouped under three heads, which represent roughly their chronological sequence. In the first group are four pamphlets, which criticise, more or less severely, the existing administration. In the second are two, more impartial in tone, commending some things, condemning others, and suggesting remedies for admitted evils. Finally, in the third we have some *quasi*-official statements from men

*(1) *Zur Kritik der preussischen Staatseisenbahnverwaltung. Eine Zeitungsdiskussion.* Berlin: Puttkammer & Mühlbrecht. 1891.

(2) *Die Entwickelung unserer Staatseisenbahnen.* Von Indicator. Berlin: Rosenbaum & Hart. pp. 33. 1891.

(3) *Unsere Staatseisenbahnen: wie sie sind und wie sie sein sollen.* Offenes Wort eines alten Praktikers. Berlin: Puttkammer & Mühlbrecht. pp. 34. 1892.

(4) *Die Stellung der höheren Techniker in der Staatseisenbahnverwaltung.* Entgegnung auf die Schrift des Herrn Ulrich. Leipzig: W. Engelmann. pp. 31. 1893.

(5) *Zur Umgestaltung der preussischen Staatseisenbahnverwaltung.* Berlin: C. Heymann. pp. 32. 1892.

(6) *Die Zukunft des preussischen Staatseisenbahn- und Staatsbauwesens und ihrer höherer Beamten.* Von einem Freunde derselben. Leipzig: W. Engelmann. pp. 46. 1892.

(7) *Die Ausbildung der höheren Verwaltungsbeamten in Preussen und ihre Stellung in der Staatseisenbahnverwaltung.* Von F. Ulrich. Berlin: Springer. pp. 62. 1893.

(8) *Die Ausbildung der höheren Verwaltungsbeamten. . . .* [Reviewed by] G. Cohn, in *Archiv für Eisenbahnwesen*, 1893, pp. 335–340.

(9) *Neuere Literatur über Eisenbahnwesen.* Von A. v. d. Leyen. *Jahrbuch für Gesetzgebung*, vol. 17, pp. 499–503 (April, 1893).

(10) *Die Ausbildung der Assessoren für die Eisenbahnverwaltung. Noch ein Wort zur Vorbildung der höheren Eisenbahnbeamten.* Von Lentze, Regierungsrath in Düsseldorf. *Archiv für Eisenbahnwesen*, 1893, pp. 637–656; 1894, pp. 255–274.

(11) *Zur Vorbildung der Eisenbahnbeamten.* Von de Terra, Eisenbahndirektor in Frankfurt. *Jahrbuch für Gesetzgebung*, vol. 17, pp. 1109–1128 (October, 1894).

(12) *Denkschrift, betreffend Umgestaltung der preussischen Eisenbahnbehörden* (April, 1894). *Annalen des Deutschen Reichs*, 1894, No. 8.

high in the administrative hierarchy, who may be supposed to give the views of the powers that be.

From one source and another the administration of the state railways of Prussia has been attacked on various points: as to the mechanical condition of the railways, as to the organization of the working force and the efficiency of the administrative machinery, and, finally, as to the training of the higher officials. These complaints run together, and cannot easily be set forth separately; but it is probable that they stand for different sorts of real difficulties, and it is at all events helpful to distinguish them in considering the individual pamphlets and articles.

The whole discussion seems to have begun with some articles published in the *National Zeitung* of Berlin in the summer and autumn of 1891, which were later reprinted in the first pamphlet cited in our list. These articles attacked the state railways for inferiority in mechanical matters, and for a supposedly detrimental predominance, in the general management, of administrators having only a legal training. As to mechanical defects, the brake question received most attention. Ten or a dozen years ago the state railways adopted the Carpenter brake in preference to the Westinghouse brake. The former is now alleged to be ineffective and unsatisfactory, and the administration is accused of having made a serious mistake in adopting it. That mistake, again, is said to have been due to insufficient knowledge among the managing officials. The education of these administrators is chiefly in the law. They are *Juristen*. Their training has been exclusively legal, and they are unable to form an independent or trustworthy judgment on mechanical matters.

The second of the attacking pamphlets, *Die Entwickelung unserer Staatseisenbahnen*, followed much the same lines as the first, but gave more attention to alleged mechanical defects. The writer set forth that the rails were badly constructed and badly laid; the whole *ober Bau* — rails, ties, and the rest — too weak; the rails insecurely supported and unevenly laid; the riding rough; hence the impossibility of running very fast trains. The methods of English railways were

declared to be much superior, and to offer a model which the Prussian roads should imitate at once. Further, the signalling methods and station arrangements were said to be inferior to the English. Interlocking and automatic signals are little in use. "The system in Germany, a thoroughly vicious one, leading to accidents like that at Bergedorf, is to rely on punctilious obedience to highly complicated instructions on the part of officials whose attention is absorbed by many and varied duties." The locomotives, also, are said to be inferior to the English. The administration adopted at one time standard passenger and freight locomotives, to be used on all the state railways, at a time when the improvement of locomotives was progressing fast in England. It is true that steps were taken later towards constructing other and larger engines; but it is alleged that the better plan would have been to make no attempt at uniformity, and to allow each division, or *Direktion*, to work at the problem for itself, thus securing some helpful variety and competition. When the *Stadtbahn* was opened in Berlin, the engines there put in service were built on the standard type, although, according to our author, they were not adapted to the peculiarities of that service. Other complaints on this score are added, which need not be further detailed, the nature of the criticisms being sufficiently indicated by those already cited.

The same writer attacks the existing methods of management on another ground,— pedantry in examinations and appointments. There is an excess of examinations, especially among the engineers and technical experts. Thus, candidates for what we should call the master-mechanic's department, the *Maschinen-techniker*, must pass at least four examinations, of which but one is said to be practical, the rest requiring mere text-book memorizing. In general, our critic finds an excessive amount of red tape. All this is supposed to be due to the absence of healthy competition, and to present a significant contrast to the successes achieved by the Germans in private industries competing in the open market with the English.

In the third publication on our list, *Unsere Staatseisen-*

bahnen, something more is said by this "practical" author of the physical condition of the roadbed, the track, the rails; something also of the excessive length and complication of the instructions given to officers, the needlessly large amount of writing and reporting required, and the mechanical compliance with rules and regulations demanded. It is stated, moreover, that the required strict compliance with formal regulations leads to the employment of needless numbers of men, and of superfluous locomotives, cars, and yard space,— all serving to swell operating expenses. But more space is here given to the predominance of the *Juristen* in the higher ranks of the administration, and to the undue subordination of the engineers. The chief power and the best pay go to officials who enter the railway service by way of the law. Next after them come the civil engineers,— if that term can be taken as an accurate translation of *Bau-techniker;* while at the bottom of the list are the mechanical engineers, or *Maschinen-techniker*. The last named, it is said, are in fact the best equipped and most competent of all the three, and should be given more rapid promotion and a larger share of the higher posts. The author emphasizes this point when he sums up his opinions, by way of conclusion, in two propositions: first, that the unsatisfactory results achieved by the state railways are due to the sway of the lawyers, whose practical knowledge and training are insufficient; and, second, that high operating expenses and unsatisfactory safeguards against accidents indicate inefficiency in the operating department, again due to the failure to put in charge those who are best equipped.

The complaints of the rule of the lawyers and of the undue subordination of the engineers, prominent in the pamphlet last cited, appear again in the fourth pamphlet, which, though published at a considerably later date, may be conveniently noticed here. It is an answer to the *quasi*-official utterance of Herr Ulrich, presently to be described, and gives attention mainly to the position, salary, and promotion of the engineers. These, it is repeated, should have a larger share in general administration; and an injustice is

said to be done them in the slowness of their promotion and the small number of higher positions open to them. In some of the later comments on this particular item in the controversy it was said that its author, evidently himself an engineer, gave evidence of nothing more than selfish complaint from dissatisfied engineers, and deserved no serious attention as a critic of general conditions; and, certainly, the questions of salary and promotion fill much space in his pages.

We may turn now to the second group, and consider briefly the two anonymous pamphlets, numbered 5 and 6, which profess to take an impartial position in the controversy. While admitting the existence of some engineering and technical defects, both of them give high praise, in general, to the administration of the state railways. Both assert, however, that the training of the railway officials is unsatisfactory. The engineers, it is said, have a too exclusively technical training, and need a better equipment in matters of administration, financial management, and economics at large. On the other hand, those now active in general administration receive a training too exclusively legal, not such as to prepare them for an understanding of the concrete questions presented to the railway administrator. The path to preferment in the higher places of the railway service, it is pointed out, is to study law at the university, take the *assessor* examination, and then secure an assignment to railway service,— in other words, to take the training traditional for those who wish to enter the inner circle of German bureaucracy. Both writers seem to be of opinion that the general principle of this arrangement should be maintained: the higher posts should be reserved in the future, as in the past, for those whose training has been for administration rather than in engineering and technology. But they admit defects in the narrow training now secured by the *Verwaltungsbeamten*. The "friend" of these officials, indeed, who writes the sixth pamphlet, presents at the close of his contribution to the discussion a very elaborate scheme for a special course of training for railway officials, in which the subjects, semesters, and opportunities for practical experience, are planned with great detail.

In the third group of papers and articles, by railway officials, unquestionably the most important is the careful paper on *Die Ausbildung der höheren Verwaltungsbeamten*, by Herr Franz Ulrich, an important official in the Ministry of Public Works at Berlin, well known as the author of perhaps the best book on railway rates. This able and distinguished writer admits the existence of some evils. He does not believe, indeed, that there is ground for deep dissatisfaction, and lets it be distinctly understood that in his judgment the higher administrative officials are not to come from the ranks of the engineers or technical experts, but to be promoted, as in the past, from the general candidates for places of distinction in the German bureaucracy. The problems with which they have to deal are largely administrative, industrial, and financial, for the solution of which the training of the engineers gives little aid. But Ulrich admits freely that at present the education of the candidate for this sort of work is inadequate. As a measure of immediate reform, he proposes that the candidates who now prepare for railway service by studying law at the universities and then taking the *assessor* examinations, shall be given some opportunity for practical experience when they first enter the service, and shall have a later opportunity to attend regular lectures and systematic instruction in railway matters. He suggests also a more radical remedy,— an entire change in the training required of candidates for the railway service, by diminishing their legal studies and requiring greater attention to economics, public administration, and technical railway questions. In fact, the training of the railway official should be a separate one as soon as he enters the university, which is to provide a course of study for him as distinct from that of the lawyer as from that of the engineer. So far as the engineers themselves are concerned, Ulrich intimates that the real difficulty in their case is that there are too many of them, the lower ranks of the profession being full and the number of higher places available for them necessarily small. Their promotion, therefore, is inevitably slow. That they should ever have an important place, not to say a commanding one, in the general administration of the railways seems to him of more than doubtful expediency.

Much in the same vein is the discussion of the subject at the hands of another writer, even better known to students of economics,— Professor Cohn, of Göttingen,— who reviews Ulrich's paper in the *Archiv für Eisenbahnwesen.* This distinguished scholar points out that the controversy is not a new one. The need of some separate training for administrative officers has often been urged in times past, and has become more prominent now only because of the enormously greater importance of efficient public administration. He intimates a doubt whether the initial training of the candidates in the law should be done away. The first two years of their university career can be advantageously given to legal studies, if only for intellectual discipline and general ripening of judgment. With the spirit of Ulrich's proposals he finds himself in hearty accord, and so joins the ranks of those who would welcome some important change in the training of the candidates for administrative positions in the railway service.

A less cordial reception, on the whole, is given to the proposals for innovation by the next two writers on our list, both again railway officials now in service. Herr A. v. d. Leyen, known to American readers by his discussions of railway experiences in the United States, and an official of position in the Prussian service, intimates even more distinctly than his colleague Ulrich that the engineers are not to aspire to more and better places than they have had in the past, and that the administration of the railways will always require a staff of officials whose training shall be predominantly legal and administrative. The explanation of the complaints made for the last few years he finds largely in the personal dissatisfaction of certain engineers. Some changes in the existing methods of training may be desirable; but, on the whole, little concession is here made to the remonstrants. Even less concession is made by Herr Lentze, in the articles cited from the *Archiv für Eisenbahnwesen.* This official finds, indeed, that the *Assessors* are not always employed to best effect in the service as it now is, being sometimes set to clerk-work, which could be attended to by less highly trained persons.

But he believes that a thorough and prolonged legal training is needful for higher administrative work, and that in this regard things should remain much as they are.

Finally, quite a different light is thrown on the situation by the article in the *Jahrbuch für Gesetzgebung* for October last. Its writer, Herr de Terra, a railway *Direktor* at Frankfort, agrees with Ulrich in believing that a training in the law does not constitute a satisfactory equipment for the duties of the higher administrative officers of the railways, and, while differing as to details, admits that there should be a separate curriculum, beginning at the outset of the university career, for candidates looking to the railway service. But more interesting to the foreigner is his presentation of one peculiar cause of inefficiency and expense. This he finds in the necessity of finding employment in the service for military officers, and particularly for non-commissioned officers, who have served their term in the army, and are to be provided for in later years by positions in the railways. In order to make the position of non-commissioned officer in the army attractive, it has been formally provided that they shall have a preferential right to appointment in various positions on the railways. Herr de Terra informs us that the work of these men is far from satisfactory; their education is insufficient, especially for responsible positions in larger stations; and the fact that they are entitled by right to their places naturally does not render them more eager and active in service. Their presence, directly and indirectly, causes operating expenses to be higher, and entails a charge on the railway administration which should properly be set to the military account. Even with this assurance of a certain livelihood in later years, the non-commissioned officers attracted to military service are said to be of unsatisfactory quality: the railways are burdened without the attainment of the desired military advantages.

The object of the preceding summaries has been mainly to present the pros and cons of the controversy to those students of railway economics who may not have had opportunity to follow it. To pass judgment on it is impossible for one not

on the ground and not in close contact with current events. The internal evidence is that some at least of the complaints are not without foundation. It is true that their anonymous character (all the pamphlets in the first and second groups are anonymous) has been urged against them in some of the *quasi*-official answers; but this hardly deprives them of weight. Place and promotion in the German bureaucracy depend so largely on the good will of the administrative chiefs that a certain stifling of free criticism is inevitable among those enrolled in the service; yet they alone are likely to have such an acquaintance with the details of management and operation as would make intelligent criticism possible.

The general impression left on the outsider is that there have been some engineering and mechanical mistakes in the Prussian administration. But, doubtless, they have been exaggerated; and doubtless it would be difficult to make out any clear connection between them and that predominance of the *Juristen* from which they are alleged to spring. Whether, on the whole, balancing successes and failures, the mechanical operation of the Prussian railways has been faulty, there is no satisfactory evidence in the material here under review. To reach any helpful conclusion on such a point is at best almost impossible for a layman, and in any case would involve a comparison, not between methods in Germany on the one hand and England or the United States on the other, but between Germany under public management and Germany under private management.

As to the training of administrative officers, and especially of those who look forward to a share in the work of general management, it has been admitted in almost all quarters that there is need for improvement. So general was the agreement on this point that a commission was appointed by the ministry to investigate the subject, and prepare a scheme for the training of railway administrators. But the commission has not reported, and apparently is not likely to do so: the whole matter seems to have been shelved. The question evidently has wider bearings than those connected with the railway service alone. It touches the unsettled educational prob-

lems as to the position of the classical gymnasium and of the humanistic training which is the main gate of entry to the bureaucracy, and to those branches of public service having the greatest social prestige. Herr de Terra, in the article cited above, has occasion to explain that the scheme of education for railway officers which he proposes will not cause their position to have less of public esteem or of *Vornehmheit*, — an explanation which of itself indicates how important a part this factor in the situation plays.

On one point there can be no reasonable doubt. There has been an excess of red tape, a multiplication of officers, an unnecessary quantity of writing and reporting in the railway administration of the last ten years. So much may be gathered with certainty from the fact that the ministry has proposed a reorganization of the railway service, described in the *Denkschrift* last enumerated in our list of publications, by means of which the services of no less than eighteen hundred administrative officers will be dispensed with. The defects of the past doubtless have been due largely to historical causes. When the private railways were bought by the state, their divisions and boundaries were naturally made the basis of the organization of the state railways. As time has gone on and the system of public management has got into permanent working order, the rearrangement in organization has become feasible, and a scheme having this object in view was laid before the Landtag during the last spring. But it may be fairly inferred that, in addition to the defects due to the transition from private to public management, some of the defects inevitable in public management even at its best have shown themselves. A certain unwieldiness, a mechanical insistence on obedience to rules and regulations, a cumbrous system of checks and counter-checks, an excess of formalism not least likely in a bureaucracy like that of Germany, a lack of freedom and elasticity,— these are the obvious drawbacks of public management; and the indications are that they have shown themselves in Prussia.

All this, however, is not inconsistent with admitting that the system of public management in Prussia has been, on the

whole, unmistakably successful. Financially, industrially, and probably even in the details of administration, the Prussians have reason to be proud of the results secured by their body of trained public servants. The opponents of public management in countries like England and the United States will doubtless be tempted to find in the current controversy evidence in support of their assertions as to the general disadvantages of state ownership. But it is significant that even the severest critics in Germany never hint at such a thing as a return to the system of private ownership or suggest that the evils of the present *régime* outweigh its benefits. If some mistakes have been made, and if some of the defects inevitable in any system of public management have been encountered, the general result has, none the less, been one in which the German people and German bureaucracy may take pride.

F. W. Taussig.